CLAIM PTO/TJOHNSON

Claims 1 and 2 Cancelled

3. (Currently Amended) A viable cellular population produced by a method comprising infecting the cells with a retrovirus in the presence of an effective immobilized amount of material including a ligand which binds to the cells and a ligand which binds to the retrovirus, so as to co-localize the retrovirus and the cells and increase the transduction efficiency of the cells, said infecting being conducted in a medium essentially free from hexadimethrine bromide.

4. (Original) The viable cellular population of claim 3 which comprises hematopoietic stem cells.

5. (Currently Amended) A method for cellular grafting, comprising:
grafting a mammal with a viable cellular population produced by a method comprising infecting the cells with a retrovirus in the presence of an effective immobilized amount of material including a ligand which binds to the cells and a ligand which binds to the retrovirus, so as to co-localize the retrovirus and the cells and increase the transduction efficiency of the cells, said infecting being conducted in a medium essentially free from hexadimethrine bromide.

Claims 6-7 Cancelled

8. (Currently Amended) A method for cellular grafting, comprising:
grafting a mammal with a cellular composition, comprising a substantially retroviral-tranduced population of viable cells, said composition being essentially free from both retroviral producer cells and hexadimethrine bromide.

9. (Original) The method of claim 8 wherein the cellular population comprises hematopoietic stem cells.

Claims 10-15 cancelled

16. (New) The method of claim 3, wherein the medium is essentially free from any polycationic agent which increases the efficiency of transduction of the viable mammalian cells by the retrovirus in co-culture, but which agent reduces the efficiency of transduction of the cells by the retrovirus in the presence of said material.

17. (New) The method of claim 16, wherein said material comprises substantially pure fibronectin, substantially pure fibronectin fragments, or mixture thereof.

18. (New) The method of claim 5, wherein the medium is essentially free from any polycationic agent which increases the efficiency of transduction of the viable mammalian cells by the retrovirus in co-culture, but which agent reduces the efficiency of transduction of the cells by the retrovirus in the presence of said material.

19. (New) The method of claim 18, wherein said material comprises substantially pure fibronectin, substantially pure fibronectin fragments, or mixture thereof.

20. (New) The method of claim 8, wherein said composition is essentially free from any polycationic agent that is effective to increase the efficiency of transduction of the viable cells by the retrovirus in co-culture.

21. (New) The method of claim 20, wherein said viable cells have been transduced in the presence of substantially pure fibronectin, substantially pure fibronectin fragments, or mixture thereof, so as to increase the efficiency of transduction by the retrovirus.